DOCUMENT RESUME

ED 470 413 CG 032 037

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TITLE	A Cross-Cultural Study on Autonomy and Perceived Control in Learning.
PUB DATE	2002-08-00
NOTE	12p.; Paper presented at the Annual Meeting of the American Psychological Association (110th, Chicago, IL, August 22-25, 2002). Research was supported by a grant from Social Sciences and Humanities Research Council of Canada.
PUB TYPE	Reports - Research (143) -- Speeches/Meeting Papers (150)
EDRS PRICE	EDRS Price MF01/PC01 Plus Postage.
DESCRIPTORS	Academic Achievement; Children; *Cross Cultural Studies; Foreign Countries; Intermediate Grades; *Personal Autonomy; *Predictor Variables; Student Attitudes; *Student Motivation
IDENTIFIERS	Canada; China; *Motivational Orientation; *Perceived Control

ABSTRACT

The present cross-cultural study tests a model of motivation on children's learning. Participating in the present study are 805 Chinese students and 740 Canadian students. Students answered survey questions related to their perceptions of parents and teachers as well as their motivation orientations and the perceived level of control in learning; their homeroom teachers also provided a rating on their diligence and performance in school. The results showed that of the four types of motivation orientation tested, the identified type of motivation orientation is the important predictor for students' effort expenditure both in Taiwan and Canada. The results of the model testing showed a strong similarity between the Canadian and the Chinese in how children's motivation affects their academic outcome. Perceived Control is shown to have an all positive influence on students' academic outcome. However, autonomy as defined by students' motivation orientation appears to be a double-edged sword; although the total effect of autonomy on children's academic achievement is positive, the model shows that without the mediation of perceived control, a high level of autonomy can actually have a significant negative impact on students' achievement. (Author/GCP)

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A Cross-cultural Study on Autonomy and Perceived Control in Learning

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Paper presented at the 110th Annual Convention of the American Psychological Association, Chicago, August 22-25, 2002

Author Note:

This research was supported by a grant to the author from Social Sciences and Humanities Research Council of Canada (SSHRC). The travel to Taiwan to collect the data was made possible by a grant from the Chinese Studies: Faculty Research Award Program for Canadians, which was sponsored by the Education Ministry in Taiwan.

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Abstract

The present cross-cultural study tests a model of motivation on children's learning. Participating in the present study are 805 Chinese students (252 grade 4's, 276 grade 5's and 277 grade 6's) from 50 different classes and 740 Canadian students (185 grade 4's, 248 grade 5's and 307 grade 6's) from 62 different classes. Students answered survey questions related to their perceptions of parents and teachers as well as their motivation orientations and their perceived level of control in learning; their homeroom teachers also provided a rating on their diligence and performance in school. The results showed that of the four types of motivation orientation tested, the identified type of motivation orientation is the important predictor for students' effort expenditure both in Taiwan and in Canada. Interestingly, the external type of motivation orientation has a significant negative effect on diligence for the Canadian students but has no significant impact on the Chinese. Although teachers and mothers are shown to have a significant influence on children's motivation in both cultures, the paternal influence is only significant for the Canadian children. The results of the model testing showed a strong similarity between the Canadian and the Chinese in how children's motivation affects their academic outcome. Perceived Control is shown to have an all positive influence on students' academic outcome. However, autonomy as defined by students' motivation orientation appears to be a double-edged sword; although the total effect of autonomy on children's academic achievement is positive, the model shows that without the mediation of perceived control, a high level of autonomy can actually have a significant negative impact on students' achievement.

A Cross-cultural Study on Autonomy and Perceived Control in Learning

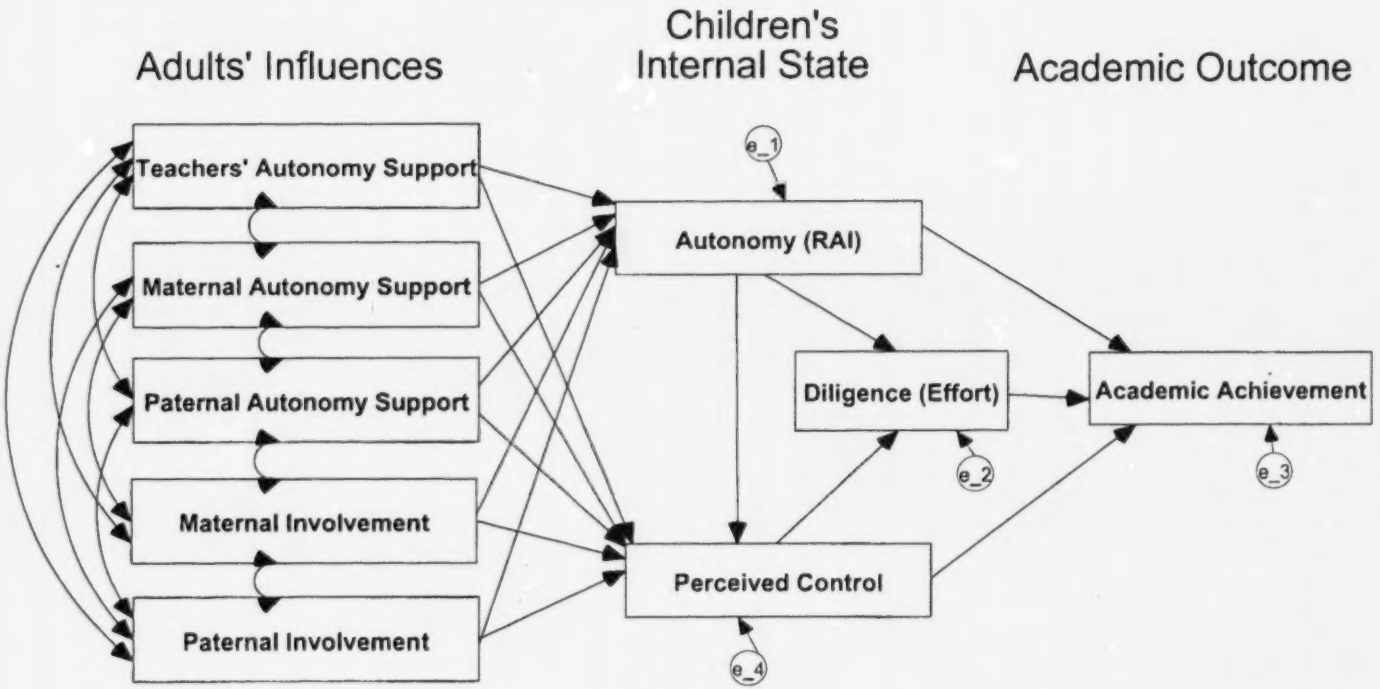
The present cross-cultural study tests a model of motivation on children's learning. Parallel research was conducted in Canada and in the Asian culture context of Taiwan. As shown in Figure 1, the proposed model focuses on the effects of children's motivation orientation (level of autonomy) and perceived control on their academic diligence and performance. Furthermore, it examines the adults' influences on children's motivation. The results of the model testing for the Chinese students are already in press (d'Ailly, in press). The present paper focuses on the cross-cultural comparison between the Canadian and the Chinese children.

Motivational researchers in North America have developed various instruments to gauge students' motivation orientation in learning. One such instrument used in the present study was Ryan and Connell's (1989) Self-Regulation Questionnaire: Academic (SRQ-A), which asks children for reasons why they do their homework and classwork, and consists of four subscales differentiated along a continuum of autonomy. These subscales are defined as External (e.g., because that is the rule), Introjected (e.g., because I want the teacher to think I'm a good student), Identified (e.g., because it's important to me), and Intrinsic (e.g., because it's fun). These subscales are then used to derive a so-called Relative Autonomy Index (RAI), with Intrinsic motivation weighted as the most positive and External as the most negative. The RAI score is then taken as an indicator of children's level of autonomy in learning.

As Harter (1981) explained, perceived control is conceptually and operationally distinctive from motivation orientation. Motivation orientation refers to the reasons why a child performs an activity while perceived control refers to the attributions children make concerning the outcomes of behaviour and their beliefs in their own capacities. To measure children's

Figure 1

A Proposed Model of Children's Motivation in Learning



control-related beliefs in this study, a short form of Wellbourn, Connell, and Skinner's (1989) Student Perceptions of Control Questionnaire: Academic Domain (SPOCQ) was used. As described by Patrick, Skinner, and Connell (1993), children who have a high level of perceived control in academic are those who believe (1) that effort is an important cause of school success, and they themselves can exert effort, (2) that although ability is not necessary for success, they themselves are smart, and (3) that they have access to powerful others and are lucky.

The influence of children's perceptions of their parents and teachers, and what effect these perceptions have on children's motivation and achievement is another focus of the present study. In assessing children's perceptions of their parents' level of involvement and autonomy support, the Children's Perceptions of Parents Scale, developed by Grolnick, Ryan, and Deci (1991) was used. Using the same format and similar item content as in the Children's Perceptions of Parents scale, a 6-item scale was developed for the use of the present study to assess children's perceptions of their home-room teachers.

Participating in the present study are 805 Chinese students (252 grade 4's, 276 grade 5's and 277 grade 6's) from 50 different classes and 740 Canadian students (185 grade 4's, 248 grade 5's and 307 grade 6's) from 62 different classes. The homeroom teachers of these students provided a ranking on the students' level of effort (diligence) and performance in school.

The scales that are adapted and used in this study have all been translated into Chinese, including the Children's Perceptions of Parents Scale (Grolnick, Ryan & Deci, 1991), the Children's Perceptions of Teachers Scale, the Student Perceptions of Control Questionnaire: Academic Domain (Wellbourn, Connell, & Skinner, 1989), and the Self-Regulation Questionnaire: Academic (Ryan & Connell, 1989). The Chinese version of these instruments

appear to have comparable reliability with the English ones, as well as good construct validity (d'Ailly, in press).

Major Findings in the Present Research

As shown in Figure 2, of the four types of motivation orientation, the identified type of motivation orientation appears to be an important predictor for students' effort expenditure both in Taiwan and in Canada. Interestingly, the external type of motivation orientation has a significant negative effect on diligence only for the Canadian students but not the Chinese students.

This findings indicate that whether a child agrees that learning is important to him or her is an important predictor for the child's effort expenditure in school both in Taiwan and in Canada. However, Canadian children appear to have a unique averse reaction to explicit pressure or prodding from an external source. Canadian children who agree more with the statement that they study because they have to, and because it is expected of them, tend to be the ones who do not put as much effort into their study. This negative effect of external motivation orientation on effort, however, does not seem to hold true for Chinese children.

Table 1. The correlations between the variables in the model for the Chinese and the Canadian children

Variables	1	2	3	4	5	6	7	8	9
1 Teachers' Autonomy Support		0.18**	0.12**	-0.01	0.05	0.29**	0.11**	0.09*	0.03
2 Maternal Autonomy Support	0.22**		0.38**	0.32**	0.13**	0.27**	0.24**	0.06	0.05
3 Paternal Autonomy Support	0.14**	0.33**		0.06	0.17**	0.10**	0.10**	0.03	-0.01
4 Maternal Involvement	0.20**	0.27**	0.11**		0.32**	0.15**	0.23**	0.08*	0.09*
5 Paternal Involvement	0.13**	0.13**	0.08*	0.32**		0.09*	0.12**	0.06	0.09*
6 Autonomy (RAI)	0.33**	0.21**	0.07	0.17**	0.16**		0.39**	0.15**	0.07
7 Perceived Control	0.24**	0.14**	-0.02	0.17**	0.25**	0.32**		0.43**	0.43**
8 Diligence (Effort)	0.05	0.03	0.00	0.02	0.11**	0.17**	0.35**		0.77**
9 Achievement	0.05	0.01	-0.01	0.03	0.16**	0.08*	0.42**	0.72**	

* significant at the 0.05 level (2-tailed). ** significant at the 0.01 level (2-tailed).
Note. Chinese results are above the diagonal, Canadian, below.

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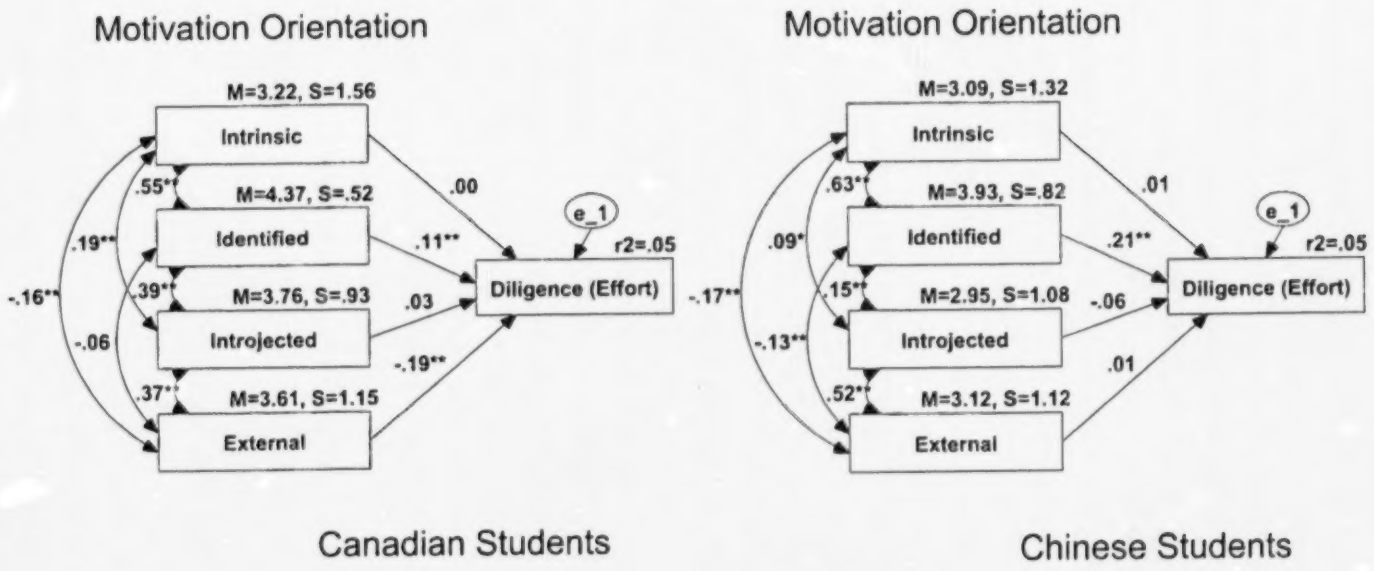
Figure 2

The Effects of Motivation Orientation on Effort



* significant at .05 level ** significant at .01 level

In a path model of motivation and learning, we examined the effect of adult influences on children's autonomy and perceived control, and further tested the relationship of these psychological factors with students' effort and achievement in school as rated by the teachers. The simple correlations among the variables tested in the model are shown in Table 1.

Figure 3 depicts the results of the model testings, showing only the significant paths in the model. As shown in Figure 3, the proposed model fit both the Canadian and the Chinese data very well, $\chi^2(20)=19$, $p=.521$. One difference in adults' influence between the two cultures is the effect of paternal involvement. For Chinese children, only the maternal involvement and autonomy support appear to have a major influence on children's autonomy and perceived control, whereas for Canadian students, fathers' involvement is shown to play an important role in influencing children's perception as well.

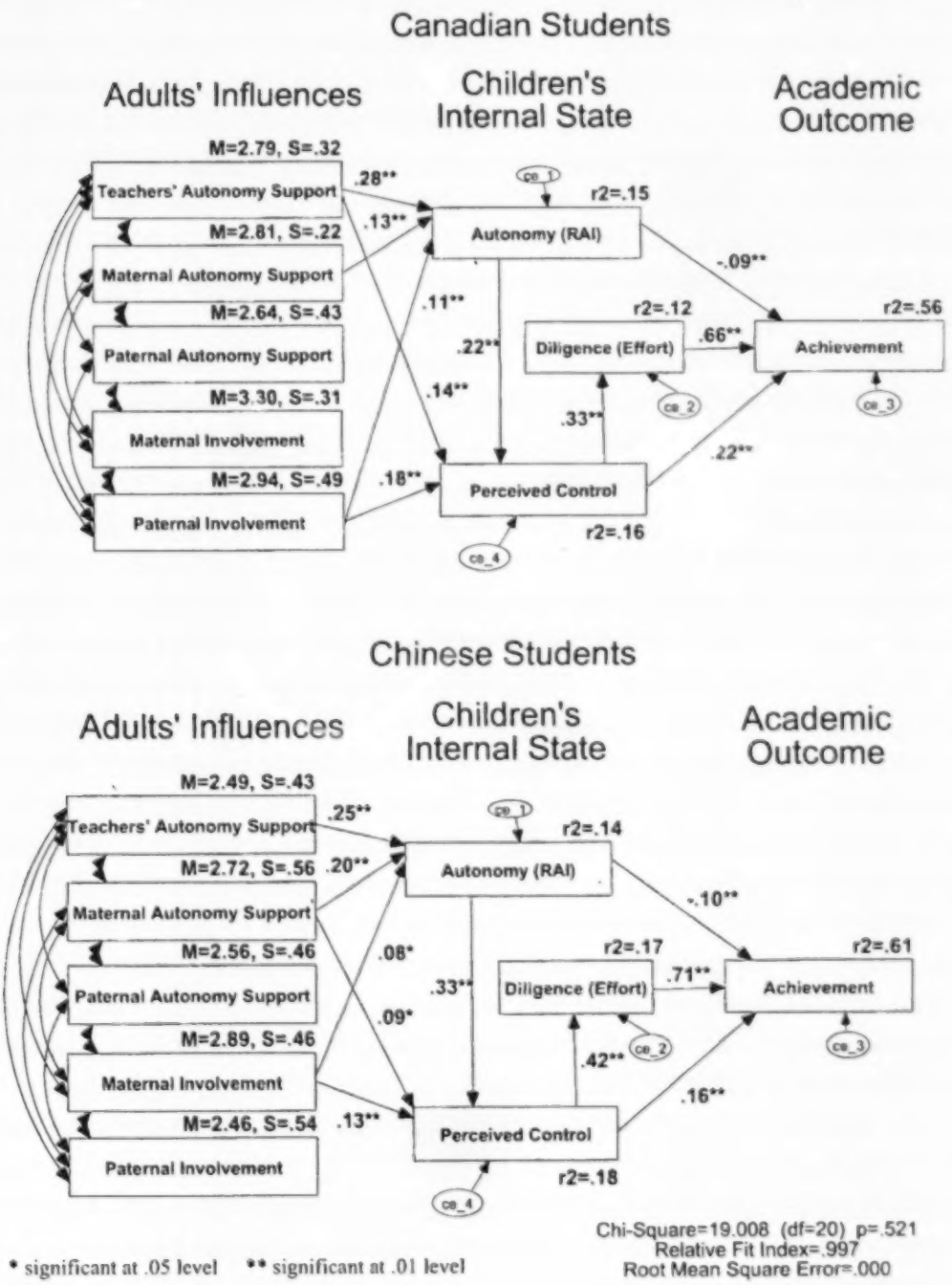
In both countries, teachers play an important role in children's level of autonomy, which has a significant impact on students' perceived control. In addition, the Canadian teachers are shown to have a direct significant influence on their students' perceived control.

The results of the model testing also showed a strong similarity between the Canadian and the Chinese in how children's motivation affects their academic outcome. For both Canadian and Chinese children, a high level of autonomy can be a double-edged sword. Although autonomy has a positive total effect on children's academic achievement (TE= .044 for both cultures), without the mediation of perceived control, a high level of autonomy actually can have a significant negative impact on students' achievement.

On the other hand, a high level of perceived control appears to be an all-positive influence in children's learning for both Canadian and Chinese students. As explained by Skinner, Zimmer-Gembeck and Connell (1998), "research on individual differences

Figure 3

A Cross-Cultural Comparison on Students' Motivation Model in Learning



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demonstrates that children's perceived control exerts a strong effect on their academic achievement and that, in turn, children's actual school performance influences their sense of control" (p.v.). Thus, perceived control does not exist as an independent construct, but is reciprocally dependent on academic achievement. A focus on helping students succeed academically in school would be beneficial in their development of a sense of perceived control as well.

In short, the results of the present study showed a few interesting differences in how Chinese children and Canadian children are motivated, but also revealed a great similarity in how autonomy and perceived control affect students' academic outcome. We found that cultivating a high level of autonomy in students, that is, encouraging students to study mainly for 'fun' and 'interest' and discouraging them to yield to any external plodding such as rules and expectations, can be a double-edged sword for both Canadian and Chinese children. The findings indicate that students from both cultures could benefit from the following educational approach: instilling in students the value of learning, focussing on students' academic achievement, encouraging parental involvement, and creating an environment where students feel that they have both the capacity and the strategy to succeed in their learning.

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